AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1-16. (Canceled).

17. (Previously presented) An apparatus, comprising:

means for sampling a temperature associated with the operation of a processing unit within said apparatus;

means, responsive to said sampled temperature, for predicting future temperature associated with the operation of said processing unit; and

means for using said prediction for automatic control of temperature within said apparatus.

18. (Previously presented) An apparatus, comprising:

means for sampling a temperature associated with the operation of said apparatus;

means, responsive to said sampled temperature, for predicting future temperature associated with the operation of said apparatus; and

means for using said prediction for automatic temperature control within said apparatus.

19. (Previously presented) The apparatus of Claim 17, including means for user modification of said temperature predictions.

20. (Previously presented) The apparatus of Claim 18, including means for user modification of said temperature predictions.

21. (Previously presented) An apparatus, comprising:

means for sampling a temperature within said apparatus and, using said sampled temperature at least once as a starting point, predicting future changes in said temperature; and

means, responsive to said means for sampling and predicting, for automatically adjusting the processing speed of a processing unit by modifying a clock signal utilized by the processing unit, to maintain said temperature within said apparatus below a selected reference temperature.

22. (Canceled).

23. (Previously presented) The apparatus of Claim 21, wherein said adjustments are accomplished within the processing unit cycles and do not affect the user's perception of performance.

24-73. (Canceled).

74. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature within said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager selectively stopping clock signals from being sent to a processing unit when one of: a) said monitored temperature rises to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate.

75. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature within said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager designating that a processing unit receives a first clock signal unless one of: a) said monitored temperature rises to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate, pursuant to which said clock manager designating that said processing unit receives a second clock signal.

76. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature within said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager reducing processing unit clock speed when one of: a) said monitored temperature rises to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate.

77. (Previously presented) The apparatus of Claim 74, wherein said processing unit is a central processing unit (CPU).

78. (Previously presented) The apparatus of Claim 75, wherein said processing unit is a central processing unit (CPU).

79. (Previously presented) The apparatus of Claim 76, wherein said processing unit is a central processing unit (CPU).

80. (Previously presented) The apparatus of Claim 74, further comprising:

a provision for user input coupled to said processing unit, and

a provision for user output coupled to said processing unit.

81. (Previously presented) The apparatus of Claim 75, further comprising:
a provision for user input coupled to said processing unit, and
a provision for user output coupled to said processing unit.

82. (Previously presented) The apparatus of Claim 76, further comprising:
a provision for user input coupled to said processing unit, and
a provision for user output coupled to said processing unit.

83. (Previously presented) The apparatus of Claim 74, wherein said clock manager further stops clock signals from being sent to a bus coupled to the processing unit.

84. (Previously presented) The apparatus of Claim 75, wherein said clock manager further stops clock signals from being sent to a bus coupled to the processing unit.

85. (Previously presented) The apparatus of Claim 76, wherein said clock manager further stops clock signals from being sent to a bus coupled to the processing unit.

86. (Previously presented) The apparatus of Claim 83, wherein said clock manager further stops clock signals from being sent to any other processors connected to the bus.

87. (Previously presented) The apparatus of Claim 84, wherein said clock manager further stops clock signals from being sent to any other processors connected to the bus.

88. (Previously presented) The apparatus of Claim 85, wherein said clock manager further stops clock signals from being sent to any other processors connected to the bus.

89. (Previously presented) The apparatus of Claim 74, wherein said temperature controller is on board said processing unit.

90. (Previously presented) The apparatus of Claim 75, wherein said temperature controller is on board said processing unit.

91. (Previously presented) The apparatus of Claim 76, wherein said temperature controller is on board said processing unit.

92. (Previously presented) The apparatus of Claim 74, wherein said monitored temperature is detected via a temperature sensor coupled to said processing unit.

93. (Previously presented) The apparatus of Claim 75, wherein said monitored temperature is detected via a temperature sensor coupled to said processing unit.

94. (Previously presented) The apparatus of Claim 76, wherein said monitored temperature is detected via a temperature sensor coupled to said processing unit.

95. (Previously presented) The apparatus of Claim 74, wherein said temperature sensor is mounted within said processing unit.

96. (Previously presented) The apparatus of Claim 75, wherein said temperature sensor is mounted within said processing unit.

97. (Previously presented) The apparatus of Claim 76, wherein said temperature sensor is mounted within said processing unit.

98. (Previously presented) The apparatus of Claim 74, wherein said temperature sensor is mounted on a printed circuit board adjacent said processing unit.

99. (Previously presented) The apparatus of Claim 75, wherein said temperature sensor is mounted on a printed circuit board adjacent said processing unit.

100. (Previously presented) The apparatus of Claim 76, wherein said temperature sensor is mounted on a printed circuit board adjacent said processing unit.

101. (Previously presented) The apparatus of Claim 74, wherein said temperature is sensed on a periodic basis.

102. (Previously presented) The apparatus of Claim 75, wherein said temperature is sensed on a periodic basis.

103. (Previously presented) The apparatus of Claim 76, wherein said temperature is sensed on a periodic basis.

104. (Previously presented) The apparatus of Claim 101, wherein the frequency of said temperature sensing changes as said temperature reaches preselected threshold values.

105. (Previously presented) The apparatus of Claim 102, wherein the frequency of said temperature sensing changes as said temperature reaches preselected threshold values.

106. (Previously presented) The apparatus of Claim 103, wherein the frequency of said temperature sensing changes as said temperature reaches preselected threshold values.

107. (Previously presented) The apparatus of Claim 101, wherein the frequency of said temperature sensing is user modifiable.

108. (Previously presented) The apparatus of Claim 102, wherein the frequency of said temperature sensing is user modifiable.

109. (Previously presented) The apparatus of Claim 103, wherein the frequency of said temperature sensing is user modifiable.

110. (Previously presented) The apparatus of Claim 74, wherein said clock manager avoids selectively stopping clock signals from being sent to said processing unit when said processing unit is processing critical I/O.

111. (Previously presented) The apparatus of Claim 75, wherein said processing unit receives said first clock signal while processing critical I/O irregardless of said one of: a) said monitored temperature rises to at least a selected reference temperature level, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate.

112. (Previously presented) The apparatus of Claim 76, wherein said clock manager avoids reducing said processing unit clock speed when said processing unit is processing critical I/O.

113. (Previously presented) The apparatus of Claim 74 wherein said clock manager selectively restores said processing unit clock speed when said monitored temperature drops to at least a selected reference temperature.

114. (Canceled)

115. (Canceled)

116. (Previously presented) The apparatus of Claim 75, wherein said clock manager further designates that said processing unit receives said first clock signal when said monitored temperature drops to at least a selected reference temperature.

117. (Previously presented) The apparatus of Claim 75, wherein said clock manager designates that said processing unit receives said first clock signal in response to detection of a critical operation, regardless if one of: a) said monitored temperature rises to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate.

118. (Previously presented) The apparatus of Claim 75, wherein said clock manager designates that said processing unit receives said first clock signal in response to processing of a critical operation, regardless if one of: a) said monitored temperature rises to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are rising at a faster than acceptable rate.

119. (Previously presented) The apparatus of Claim 76, wherein said clock manager raises said reduced processing unit clock speed when said monitored temperature drops to at least a selected reference temperature.

120. (Canceled)

121. (Canceled)

122. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature within said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager selectively raising the frequency of clock signals being sent to a processing unit when one of: a) said monitored temperature drops to at least a selected reference temperature, and b) said predicted changes in said monitored temperature are at an acceptable rate.

123. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature associated said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager selectively stopping clock signals from being sent to a processing unit when said monitored temperature rises to at least a selected reference temperature and thereafter continues to rise on successive readings of said monitored temperature.

124. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature associated said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager reducing processing unit clock speed when said monitored temperature rises to at least a selected reference temperature and thereafter continues to rise on successive readings of said monitored temperature.

125. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature associated said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager selectively stopping clock signals from being sent to a processing unit in response to successive readings of said monitored temperature indicating an upward trend in temperature.

126. (Previously presented) An apparatus, comprising:

a temperature controller for monitoring temperature associated said apparatus and, using said monitored temperature at least once as a starting point, predicting future changes in said monitored temperature; and

a clock manager adapted to receive a control signal from said temperature controller, said clock manager reducing processing unit clock speed in response to successive readings of said monitored temperature indicating an upward trend in temperature.

127-136. (Canceled)